MIL-190C

Fast•Twist
Fast Ethernet Converter
Single-mode Fiber

Power Connector

5VDC 1 Amp

Digi

FAST•TWIST

Model MIL•190
100BaseFX
to
100BaseTX
Fast Ethernet
CONVERTER
Single Mode Fiber

Ethernet / IEEE 802.3

Phillips-head Screws

Phillips-head Screws

POWER

FX ACTIVE — — TX ACTIVE

TX   RX

SC-Type Connector

LEDs

RJ-45 Connector
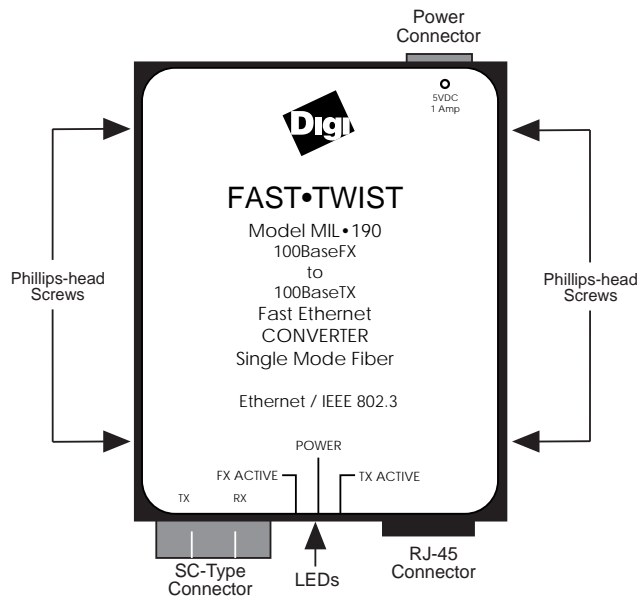
Installation Guide

This guide includes the following information:

Doc #: 90000072 Rev. A

Introduction

The MIL-190C supports Fast Ethernet in both half- and full-duplex mode. For network budget constraint, the MIL-190C uses 150 nanoseconds (approximately 30 meters of cable) during conversion in each direction.

To maximize the fiber cable distance, use one meter of category 5 (CAT 5) UTP cable when connecting directly to a node (subject to fiber budget of 16 dBm and collision domain restrictions). In full-duplex environments, up to 100 m of CAT 5 UTP and 15Km of 1300 nm single-mode fiber cable can be used:

- Launch power: -15dB

- Receive sensitivity: -31dB.

Installation

1. Attach a UTP cable from the network to the RJ-45 port. (Use screened UTP cabling for CISPR 22 class B installation.)

2. Cross-connect the fiber cables: Attach both fiber cables TX to RX and RX to TX from the fiber network cabling to the SC-type connector on the MIL-190C.

3. Apply power to the unit:

   a. Insert the power adapter's receptacle into the power plug.

   b. Insert the power adapter into a wall outlet.

Diagnostic LEDs and Conditions Indicated

Table 1:

LED	Condition	Color
TX Active	Device is active on the 100BASE-TX UTP	Yellow
Power	Device is receiving power	Green
RX Active	Device is active on the 100BASE-FX UTP	Yellow

Note: The "Active" lines indicate that a valid receive signal is sensed. Check the devices connected to each end of the MIL-190C to ensure that Link is present at those points as well.

Configuration

The MIL-190 is configured to support auto-negotiation between half- and full-duplex modes. Jumper JP1 is configured with pins 2-3 "jumpered," which allows auto-negotiation between these two modes.

However, if you are connecting to a device that supports half-duplex only (or full-duplex only), then you should disable jumper JP1. Do the following to disable JP1:

Note: Turn off power "before" attempting to configure the device.

1. Locate and remove the four phillips screws located on the side.

2. Separate the bottom unit from the top unit.

3. Locate the JP1 Jumper and remove the jumper block from pins 2 and 3.

4. Place the jumper block onto pins 1 and 2 (See Figure 3).

5. Re-assemble the bottom back onto to the top portion.

6. Secure the unit with the four phillips-head screws that were removed earlier.
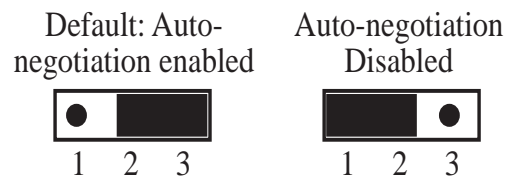
Default: Auto-negotiation enabled   Auto-negotiation Disabled

1   2   3   1   2   3

Figure 1.JP1 Configuration Options

RJ-45 Pinouts

MDI		MDI-X
Pin 1=TX+		Pin 1=RX+
Pin 2=TX-		Pin 2=RX-
Pin 3=RX+		Pin 3=TX+
Pin 6=RX-		Pin 6=TX-

1 2 3 4   5 6 7 8
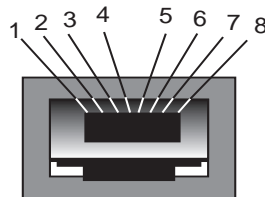
Figure 2.RJ-45 Pinouts

Legal

Regulatory Approvals

- FCC Class A
- UL 1950
- CSA 22 No. 950
- EN60950
- CE
  - EN55022 Class B
  - EN50082-1

Canadian EMI Notice

This Class A digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the commission of the European Community. Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22) - Radio Frequency Interference
- EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity
- EN60950 (IEC950) - Product Safety

To Contact Digi

For prompt response when calling for service information, have the following information ready:

- Product serial number and rev.
- Date of purchase
- Vendor or place of purchase

Reach Digi Technical Support at 408/744-2751
Or E-mail at "sun-tech@dgii.com"

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         Sunnyvale, CA 94089
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